

US-PAT-NO: 5801944

DOCUMENT-IDENTIFIER: US 5801944 A

TITLE: System and method for printing postage indicia directly on documents

DATE-ISSUED: September 1, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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US-CL-CURRENT: 705/401,345/352 ,700/231 ,700/232 ,700/233 ,700/235 ,705/408 ,705/411

ABSTRACT: A system and method for printing a postage meter stamp, including a desired postage amount and a personalized postage indicia onto a label or onto a document directly. A processor based system is programmed to interact with a customer to produce individualized documents, printed address labels, and a printed postage meter stamp having in one embodiment, a customized postage indicia. The processor based system automatically calculates the postage due for a specific document, prints that postage amount as a meter stamp, interacts with the customer to generate a personalized stamp indicia, encrypts selected information into a machine readable format, and prints the information entered by the customer in a selected format, all on the document for transfer to the outside of a mailing envelope.

29 Claims, 26 Drawing figures

Exemplary Claim Number: 21

Number of Drawing Sheets: 19

BSPR: Many of the programs in use today print the mailing address (as taken from the document) on labels which are printed in conjunction with the creation of the document. These labels then are peeled off the document and transferred to the outside of the mailing envelope to save the user time and to avoid placing the envelope in the printer or otherwise addressing the envelope.

BSPR: Thus, it is an object of the present invention to provide a means for the customer to enter the appropriate rate determining information such as the address to which the customized greeting card is being sent, what class of mail document to concurrently calculate the appropriate postage for the greeting card and print the appropriate postage for that document at the same time the document is being printed.

BSPR: The present invention fulfills the needs discussed above by disclosing a method and a system whereby a customer may automatically calculate the correct amount of postage, print the correct amount of postage, personalize a selected stamp indicia, and print address labels at the same location where the customer generates a customized greeting card.

DEPR: The present invention provides for a portable postage storage device, described in more detail below, that can be coupled to a general purpose processor-based system that interacts with a customer to generate a document, or other piece of mail.

DEPR: The loaded postage may be accessed and a portion of that postage retrieved via a program stored on a processor-based system, such program hereinafter referred to as the "E-STAMP" program. The E-STAMP program may be stored on a processor-based system that also contains

a document generating system. The document generating system may be used to generate customized mail, as for example personalized greeting cards.

DEPR: Once the user has registered his E-STAMP program with Post N Mail and his postal storage device 18 with the Post Office, he may then load the E-STAMP program into a processor-based system 10, if he has not already done so. In a preferred embodiment of the present invention, the E-STAMP program is loaded into a processor-based system controlled by a set of instructions from a document generating program, preferably an application program programmed to piece of mail.

DEPR: Thereafter, in step 912 the customer has the option to continue the program and have the appropriate postage for the card calculated and printed. If the customer declines to continue, then the card greeting system will terminate its interaction with the customer at step 913 and print the addresses on labels or an envelope, whichever was selected by the customer at step 911.

US-PAT-NO: 5377120

DOCUMENT-IDENTIFIER: US 5377120 A

TITLE: Apparatus for commingling & addressing mail pieces

DATE-ISSUED: December 27, 1994

INVENTOR-INFORMATION:

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US-CL-CURRENT: 700/224,270/58.01 ,705/406

ABSTRACT: An apparatus ideally suited for the small mailing service is disclosed. The apparatus can take pre-printed, un-addressed mail pieces of non-identical size delivered to the mailing service from different merchants and combine the mail pieces to create mailing bundles at the lowest postal rate and group the bundles to create a single mailing. In the apparatus a computer serves to take the merchant mailing lists, merge and sort the entries thereon into lowest postal rate groupings, and use this merged data base to enable a sequence controller and associated machinery to physically commingle and address the non-identical mail pieces into the single mailing bundle. Provision is also made for generating required postal service documentation and invoices from the mailing service to the merchants.

19 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

BSPR: A large number of merchants maintain their customer data bases on computers which they use to perform several functions, one of which is to print addresses for pieces they wish to mail to selected customers.

BSPR: For the most part the merchants print the addresses on labels, apply the labels to the mail pieces, and mail them at the first class rate because postal regulations are too complicated to obtain a lower rate. Several large merchants do use the lower discount rate available because they can afford mailing services which apply the rules and regulations of the United States Postal Service to obtain the lower rate. Small volume merchants are often unable to obtain these favorable rates due to lack of knowledge or low mailing volume.

BSPR: Another type of known apparatus, exemplified by U.S. Pat. No. 5,053,955, creates a merged data base of merchants' customer address lists grouped by the lowest postal rate. Then using a corresponding file of information to print on each mailing piece according to the merchant's needs, the apparatus serially prints and addresses a determined postcard-format mail piece for each addressee according to the grouped address list.

BSPR: The average merchant, however, is unable to achieve the economies of scale necessary to utilize the known apparatuses. The average merchant has his own unique fliers, usually single sheets of paper, printed by a printing company and wishes to address and mail these pieces at the lowest cost. A mailing service desiring to serve the average merchant must accommodate these preprinted, unaddressed, non-alike low volume mailings without prior knowledge of the type of pieces to be mailed.

BSPR: The present invention discloses a machine for lowering the mailing costs of small volume merchants by producing bundles for low postal rate mailings which are made up of the commingled pieces from a plurality of merchants. The machine comprises, in the preferred embodiment, a first computer operable to combine the mailing lists of a plurality of merchants and group the addresses on the mailing lists according to the lowest postal rate. The first computer is further operable to generate the address information required by postal regulations, such as bar codes or zip+4 numbers, for each address; and to further assign a merchant- identifier tag to each address thus creating a merged data base of the merchants' mailing lists. The first computer is further operable to generate documentation for the post office as well as individual client invoices. A second computer serves as a sequence controller to operate mail piece handling machinery according to the grouped addresses. The present invention further comprises the mail piece handling machinery for physical commingling and addressing of the different merchants non-alike pieces. The mail piece handling machinery includes hopper/feeders adjustable to hold and singly eject any of various sized and/or type pieces, transporting or conveying means for receiving the pieces from the hopper/feeders and moving the pieces in data base order to an addressing means, and the addressing means for placing the proper address, including bar codes needed to obtain low postal rates, on each piece.

CLPV: c) a sequence controller for receiving the records of the grouped addresses and for controlling mail piece handling machinery according to the records;

CLPW: 3) an addressor for receiving the commingled mail pieces from the mail piece transporter, and applying addresses to the mail pieces consistent with the low postage rate.

US-PAT-NO: 5329102

DOCUMENT-IDENTIFIER: US 5329102 A

TITLE: Method and apparatus for preparing validated mail tray labels

DATE-ISSUED: July 12, 1994

INVENTOR-INFORMATION:

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US-CL-CURRENT: 235/375,209/546 ,209/584 ,235/378 ,235/384

ABSTRACT: A method and system for providing validated labels that are attached to mail trays immediately upon mail being processed by a mailer and placed in a tray. Mail lists and programs for sanitizing the mail list and sorting the mail to achieve postal discounts are stored in a mailer's processor. A printer is controlled to print addresses on documents, such as letters, that are forwarded to an inserter. A mail list stored in the processor indicates where the mail is to be sent, the class of mail, level of sortation and the contents of the mail . Tray contents are computed and appropriate labels are prepared by a label printer under its control. By making the tray label printing an intricate part of the mail processing system, as opposed to being an adjunct to it, the providing of the labels becomes more efficient, reliable and economical.

16 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

ABPL: A method and system for providing validated labels that are attached to mail trays immediately upon mail being processed by a mailer and placed in a tray. Mail lists and programs for sanitizing the mail list and sorting the mail to achieve postal discounts are stored in a mailer's processor. A printer is controlled to print addresses on documents, such as letters, that are forwarded to an inserter. A mail list stored in the processor indicates where the mail is to be sent, the class of mail, level of sortation and the contents of the mail . Tray contents are computed and appropriate labels are prepared by a label printer under its control. By making the tray label printing an intricate part of the mail processing system, as opposed to being an adjunct to it, the providing of the labels becomes more efficient, reliable and economical.

BSPR: Normally, a printer prints documents, such as a series of letters, under control of a mail list program and conveys those documents to an inserter sequentially. The inserter will then add selected inserts for each document in accordance with the program and these inserts, along with the document, will be inserted into an envelope to form the final mail piece. Usually, the envelope will be a windowed envelope whereby the address printed on the document will be visible through the window.

BSPR: The mail pieces can either be weighed or their weights computed from their contents. Subsequently, other operations will take place such as determining the amount of postage, accounting for the postage, reading the zip code on the address of the mail pieces and printing a postal bar code on the envelope in response to such reading. The mail pieces are then placed in a tray in accordance to postal requirements to be sent to the post office. The tray must have a label attached thereto that identifies the mailer and the contents of the tray with regard to the class of mail, level of sortation, location of the post office and the ultimate destination of the mail

including the zip code. Some of this information can be in bar code format.

BSPR: A method and system have been devised whereby validated labels for mail trays can be automatically provided for trays immediately upon mail being processed by a mailer and placed in a tray. A mail room system controller has stored therein a mail list and programs for sanitizing the mail list and sorting the mail to achieve postal discounts. A main frame computer, or the system controller, controls a printer that prints addresses on documents, such as letters, that are forwarded to the inserter. Because the address list stored in the controller indicates where the mail is to be sent, the class of mail, level of sortation and the contents of the mail, the controller has the information whereby tray contents can be computed and identifying labels can be prepared by a label printer under its control. More specifically, by making the tray label printing an intricate part of the mail processing system, as opposed to being an adjunct to it, the providing of the labels becomes more efficient, reliable and economical.

DEPR: Referring now to FIG. 1, a mail processing system is shown generally at 10 and includes an inserter 12 which may be one of a number of commercially available inserters such as a model 8300 series inserter available from Pitney Bowes Inc., and a folder 14 that folds sheets and forwards them to the inserter. Although the folder 14 is shown as a separate device, it will be appreciated that it could be a unit of the inserter 12 as found in some commercial inserters. The inserter 12 and folder 14 are in communication with a system controller 16 which receives folding information from the folder and exchanges information with the inserter 12 and other units of the mail processing system 10 as will be described hereinafter. The controller 16 may be one of a number of commercially available computers such as an IBM model 80 PS/2 and would have stored therein selected portions of the Domestic Mail Manual (DMM). The controller 16 is in communication with a processor 18, such as a main frame computer, that will have a data base 20 which will store a multiplicity of mail address lists and accounts which will be organized geographically, by types of accounts, action dates, or in any other convenient manner, and mailing information including materials in the form of inserts to be sent to mail recipients including the weights and thicknesses of the inserts and documents. The processor 18 will store programs such as FINALIST.RTM. and MAILERS CHOICE.RTM., which have been previously described, whereby the processor can control the processing of mail and will include postal sort schemes, address standardization routines and a program for organizing the various other programs to program the mail preparation routines. The processor 18 is in communication and will download selected mail list and address information to the controller 16 and to a document printer 22. By mail list is meant the names and address of recipients and materials to be received and by mailing information is meant zip code data, class of mail, postal distribution center where mail is to be sent, level of pre-sort and the like. The printer 22 will print a letter, or first page of inserts, for subsequent folding by the folder 14 and insertion by the inserter 12 into a windowed envelope. By first page is meant that page which will be adjacent to the window of the envelope so that it can be seen. The first page will have the name and address of the addressee printed thereon so as to be visible after being inserted into an envelope. Although as shown the document printer 22 is in communication with the processor 18, the document printer can be in communication with and controlled by the controller 16 as shown by the dotted lines thereby requiring the use of only one computer.

DEPR: In operation, the data base 20 of the processor 18 stores the addresses and accounts so that a mail run can be carried out in accordance with its program as described. An operator would select the mail run to be processed and the processor 18 would control the printer 22 to print documents each with the name and address of the recipient, as well as any text required. A machine readable code, such as a dash code, also can be printed on the document to be read by the inserter 12. This code would determine the inserts to accompany a particular document as is well known in the art. For example, if the controller 16 is to process mail that is for the purpose of sending insurance statements due on a particular date to individuals having life insurance with a given insurance company, the main frame will extract the information from the data base 20 and optionally will forward the list of such insured persons to the controller 16. This list would include names, addresses, type of insurance, date payments are due, amount of payment and number of additional materials to be added by the inserter 12. The operator will insert the customer list to be run, as stated previously, either through the keyboard of the main frame 18 or by tape, which would include the inserts to be inserted by the inserter 12. The controller 16 will receive information from the folder 14 as to the number of times the document received from the document printer 22 is folded. The operator will enter through the keyboard of the controller 16, the type of document or letter to be printed and will have stored data relative to the type of document whereby the controller will know the weight of the document. Based upon the number of folds, type of document and number and types of inserts for a mail piece, the controller 16 will determine the weight and thickness of each mail piece that will be processed as well as the total number of mail pieces processed by the inserter 12. The zip code of each mail piece will be known because of the receipt of appropriate mailing information from the main frame 18. The controller 16 has the necessary domestic mail manual (DMM) regulations stored therein and will determine if the mail pieces being processed meet the latest DMM requirements based upon data received from the folder, inserter 12, scale 26, and OCR reader 28 and will control the number of mail pieces placed in a tray 36 based upon zip code information stored. The controller 16 will receive the measured weights of the mail pieces from the scale and compare this with the stored weights to determine if there is coincidence i.e. agreement between the measured and estimated weights. If different, those mail pieces will be outsorted by being placed in the reject bin 38 and the system would be checked to determine the reasons for the discrepancy. The controller 16 will also receive the read address information from the OCR device 28 and compare such read information with the stored mailing information. If there is coincidence, the particular mail piece will be processed by being placed in a tray 36, but if not, the mail piece will be outsorted into the reject bin 38. Using this read address information from the OCR device 28, the controller 16 also will determine if the DMM requirements for postal discounts are met, i.e., it will determine if a sufficient number of mail pieces are sent to a destination to qualify for a postal discount. If not, the controller 16 will determine the difference in postage for which there would be a subsequent accounting or it will cause the mail pieces to be placed into the reject tray 42 depending upon the wishes of the mailing.

DEPR: With regard to the number of mail pieces to be placed in a tray 36, this will either be determined by the number that can fit into a tray, taking into account the thickness and number of inserts, or the addresses of the mail pieces. For example, all the mail pieces in a tray will go to a single distribution center and a tray will be only partially filled if there is only a limited amount of mail for such distribution center. On the other hand, if a large number of mail pieces

are to be sent to a given distribution center, the thickness of the mail pieces will determine the number of mail pieces in a tray 36 and more than one tray would have mail for a given distribution center.

CLPR: 3. The system of claim 1 wherein said first printer includes means for printing codes on documents to be read by the inserter for determining inserts that are to accompany the document in a mail piece.

CLPV: printing documents with names and addresses from the stored mail list,

CLPV: printing a label to identify the class, classification and destination of the tray, and

CLPV: printing documents with names and addresses from the mail list and a code based upon the provided mailing information,

CLPV: printing a label to identify the class, classification and destination of the tray, and